STRUCTURAL NOTES

BACKFILL: Under floor slabs and footings shall be clean, compacted sand.

CONCRETE: Shall be proportioned to give a minimum 28 day compressive strength of 2000 psi for continuous wall footings and slab on grade, and 2000 psi for foundation walls unless indicated otherwise. The slump shall be the minimum consistent with placing conditions but shall not exceed 4-1/2".

MASONRY: Shall be hollow concrete units, grade N, conforming to U.B.C. Standard #24-4. Grout shall be proportioned to give a minimum of 28 day compressive strength of 2000 psi. All cells shall be grouted solid. Reinforcing steel shall be accurately placed and positively in bond beam units. Units shall be placed in Type M or S (1500psi) mortar in running bond. Reinforcing steel shall be as noted on the plans except that all openings and end cells shall be reinforced with 2-#4 bars for 8" block along each boundary and extending 24" beyond all corners or through dowels to foundation. Construction shall conform to Section 2415 of the U.B.C.

REINFORCING STEEL: Shall conform to ASTM A615 Grade 40 for #3 bars and smaller, and Grade 60 for #4 bars and larger. Bars shall be wired together and lapped at splices a minimum of 30 bar diameters in concrete and 40 bar diameters in masonry. Where concrete is poured against earth, provide 3" minimum concrete around reinforcing steel. Concrete cover for other conditions to follows:

Formed Concrete Slab	1" min.	Below Grade-Formed	2"min.
Concrete Slab on Grade	1-1/2"min.	Other	See plans

WELDED WIRE FABRIC: Shall be per ASTM A185 of the gauge and mesh size indicated on the plans, and shall be lapped a minimum of one mesh at all splices. Fabric shall be raised that depth at the free edge of the pour. Use 6"x6" #10 welded wire mesh minimum in all concrete slabs unless otherwise noted.

LUMBER SCHEDULE: Minimum lumber shall be as follows:(except better where noted on plans)

Rafters & Floors Joists	DF #2 or better except as noted.
Beams & Headers: 5x5 & Larger Posts	DF #1 or better as noted.
2x4 Studs & Blocking: 4x4 Posts	DF Standard or better.
2x6 & Larger Studs,Blocking,Wall Plates	DF #2 or better.
Wood Sills	Pressure Treated DF #1 or better.

PLYWOOD: Shall be 3/4" T&G Doug.Fir Plug & Touch Sanded @ subfloor. 1/2" CDX Exterior shear plywood @ sidewalls. 5/8" CCX plywood @ Roof sheathing.

STUD WALLS: Horizontal bridging shall be installed in all walls and partitions where studs are more than 8'-0" in height. Stud walls supporting beams shall have posts under bearings unless otherwise noted. Non-shear and non-bearing partitions are not shown.

WOOD SILLS: Shall be attached to concrete slab or foundation with 5/8" x 10" anchor bolts at 4'-0" maximum spacing except as noted otherwise. There shall be a minimum of two fasteners per piece of sill.

DOUBLE PLATES: Shall lap a minimum of 4'-0" at splices and be nailed with no less than 12-16d nails each piece except as otherwise noted. All cuts in plates to occur over a stud.

HOLES: In wood sills or plates of shear or bearing walls shall be placed in the center of piece and shall be no greater in diameter than 1/3 the width of member. Holes larger than noted above may be bored in sills providing the sill is considered cut in two and anchor bolts placed accordingly.

BOLTS: Shall conform to ASTM 307 and U.B.C.Standard 25-17 unless noted otherwise. Bolt holes in wood shall be drilled 1/16" oversize. Washers shall be used in all bearing of heads and nuts against wood. Washers shall be standard cut washers except as noted. Bolts, nuts and washers shall be hot dip galvanized where exposed to the weather. All nuts shall be tightened when placed and retightened at completion of job or immediately before finishing construction work which will make them inaccessible.

LINTELS: Over openings in non-bearing walls shall be solid members the width of studs and of a minimum nominal depth at least equal to span in length in feet. Lintels in bearing walls to be 4x6 except as noted on plans.

CUTTING: Of beams and joists for pipes shall not be permitted without the approval of the Architect.

FRAMING ANCHORS: And other standard framing accessories shall be "Simpson" or approved equal, of the designation noted on plans. All nails shall be of size and length specified and supplied by the manufacturer unless noted otherwise. Use following schedule unless noted otherwise:

Joist Hangers	LU Series	Post to Sill Plate	BC Series
Beam to Plate	BC Series	Post to Concrete	PB Series
Post to Beam	AC Series		

CONCRETE ANCHORS: Where specified or required to be Phillips "Red Head" or approved equal.

CONVENTIONAL CONSTRUCTION: Requirements of the U.B.C. shall apply where applicable and when not specifically noted otherwise on the drawings. All nails shall be common wire nails of number and spacing specified in the latest edition of the U.B.C. Table No.25P unless specifically noted otherwise.

HEADERS: Shall be full, nominal width of the walls in which they occur by depth as indicated below:

Less than 4'-0"	4"
4'-0" to 6'-0"	6"
6'-0" to 8'-0"	8"
8'-0" to 12'-0"	12"

Where headers occur in 2x6 stud walls the headers shall be 6" nominal width.

GLUED LAMINATED LUMBER: SHALL BE MANUFACTURED IN ACCORDANCE WITH U.B.C. STANDARD Nº 25-10. ALL WORK SHALL BE UNDER THE SUPERVISION OF QUALIFIED PERSONNEL.

GENERAL ARCHITECTURAL NOTES:

1. No wood shall be placed less than 6 inches from earth.
2. The minimum thickness of concrete slabs shall be 3-1/2 inches unless shown to be greater.
3. Change in floor level at doors shall not exceed one inch maximum.
4. Plywood sheathing on roof overhangs shall be CCX or better.
5. Where attic spaces are created, an attic access panel a minimum of 22"x30"with 30" headroom above shall be provided.
6. Where attic space is created, it shall be vented with eave vents equal to 1/150 of the area to be ventilated.
7. The Clothes Dryer shall be vented to the outdoors.
8. All Buildings are slab on grade construction. No Basement spaces are proposed.
9. The building shall be equipped with a products of combustion detectors as shown on the Electrical Plans. The products of combustion detectors shall be wired into the main house wiring electrical system.
10. INSULATION REQUIREMENTS: Title 24, See Calcs by: M.C.Patterson

Total Floor Area	3524 sf
Window Area	475 sf
Regular Glazing	475 sf
Thermopane Glazing	0 sf

Insulation of;

Ceilings @ Vented Attic	11" Fiberglass	R=30.0
Roof @ Open Beam	3" Technifoam	R=21.6
Roof @ Sloping Section	6" Fiberglass	R=19.0
Walls	6" Fiberglass	R=19.0
Floors Over Unheater	6" Fiberglass	R=19.0
Slab floors Slab Perim.	1"Rigid. Type	R= 7.0

11. Water Heaters to be 30 Gallon "STATE" Model No.PRV-30-NRT4-2H with built in R=16 insulation. 32,000BTU
12. All Glazing used in tub and shower enclosures shall be tempered glass,or other approved safety glazing.
13. Tub and Shower area walls to be finished with a smooth non-absorbent surface such as ceramic tile, to a height of 6'-0" minimum or higher as shown on interior elevations.
14. ~~Provide spark arrestor at all chimneys.~~
15. All glazing in doors to be tempered glass, and glazing within 12" of doors.
16. Provide wall bracing in all exterior walls with 1/2"CD exterior plywood nailed with 6d @ 4"o.c. edges & 6"o.c.in field.
17. ~~Chimney shall extend 2'-0"minimum above the highest point of the roof within ten feet of that chimney.~~
18. Provide a Minimum 24"x12" access panel to each tub slip joint connection. Access panels shall be 1/2"AC plywood with trim similar to doors,& paint to match walls. Locate within 16" of floor above base board trim.
    A) Bath 2 tub access panel shall be into the wall of the Closet in Bedroom 2.
19. All hot water lines shall be insulated with 1" pipe wrap.
20. ~~The Fireplace at the South Wing is to be job built masonry construction.~~
21. Fireplace Clearances; Shall conform to the Uniform Building Code as follows; Note that the drawings may required greater clearances.
    a) Depth of Hearth= 20", Hearth @ Sides 12", Surround top & Sides 12"
22. ~~No gas log lighters will be provided.~~
23. Hot Water Heater shall be provide with pressure relief valve and drainage to outside. End pipe 6" from ground pointing downward.
24. Provide electrical ground to main electrical panel with #4 copper wire located within 2" of bottom of concrete foundation with enough wire to reach service panel.
25. All Bathroom, and Outdoor receptacles shall have GFI protection.
26. Piping Specifications;
    a) Interior & Exterior supply water piping to be type M Copper.
    b) All waste lines to be ABS plastic pipe.
    c) All gas pipe to be black iron pipe with special wrapped pipe used at underground locations. Also wrap all underground joints.
27. Typical Stairway Dim.;
    Entry @ South Wing= 6'-6", South Wing Elev.= 8.0', Second Floor Elev.= 18'-2¾"

Entry @ South Wing to 2nd Story	Entry @ South Wing down into South Wing
a) Risers 17R @ 7.22" each	a) Risers 3R @ 6.0"
b) Treads 11" wide typical.	b) Treads 12" wide typical
c) Width= 40"min. See Plan.	c) Width= 13'-0" See Plan
d) Head Clearance 6'6"minumum.	d) Head Clearance 8'0"minimum

28. Guardrails shall be 42"minimum typical height with no openings greater than 6" between pickets. All Stairways shall have handrails on both sides at 2'-8" above the stair nosing.

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